

CLAIMS:

1. A device comprising:

a first optical fiber having a polished end and a splicing end, the polished end and the splicing end of the first optical fiber separated by a first length;

a second optical fiber having a polished end and a splicing end, the polished end and the splicing end of the second optical fiber separated by a second length, the second length of the second optical fiber being substantially the same as the first length of the first optical fiber, the second optical fiber being substantially parallel to the first optical fiber, the second optical fiber and the first optical fiber form a plane, and the second length of the second optical fiber being less than fifty millimeters; and

a body having a mating end and a splicing end, the mating end and the splicing end of the body separated by a third length, the first optical fiber bonded to the body, the second optical fiber bonded to the body, the polished end of the first optical fiber and the polished end of the second optical fiber being substantially flush with the mating end of the body, and the third length of the body being less than the first length of the first optical fiber.

2. A device according to Claim 1, further comprising an adhesive material positioned between the first optical fiber and the body, and between the second optical fiber and the body so as to bond the first optical fiber to the body, and to bond the second optical fiber to the body.

3. A device according to Claim 2 wherein the body has a first aperture, the first aperture extending from the mating end to the splicing end, a first portion of the first optical fiber positioned in the first aperture, and wherein the body has a second aperture, the second aperture extending from the mating end to the splicing end, a second portion of the second optical fiber

positioned in the second aperture.

4. A device according to Claim 3 wherein the body is made of a polymer material.

5. A device according to Claim 4 wherein the first optical fiber is made from a glass material, and wherein the second optical fiber is made from a glass material.

6. A device according to Claim 5 wherein a coefficient of thermal expansion of the glass material of the first optical fiber is substantially the same as a coefficient of thermal expansion of the polymer material of the body, and wherein a coefficient of thermal expansion of the adhesive material is substantially the same as the coefficient of thermal expansion of the polymer material of the body.

7. A device according to Claim 6 wherein the device is compatible with and mateable to a receptacle for a connector where the connector is selected from the group consisting of MT, MP, MTP/MPO, MPX, MAC, OGI, and HBMT style connectors.

8. A device comprising:

a first optical fiber having a polished end and a splicing end, the polished end and the splicing end of the first optical fiber separated by a first length;

a second optical fiber having a polished end and a splicing end, the polished end and the splicing end of the second optical fiber separated by a second length, the second length of the second optical fiber being substantially the same as the first length of the first optical fiber, the second optical fiber being substantially parallel to the first optical fiber, the second optical fiber and the first optical fiber form a plane, and the second length of the second optical fiber being less than fifty millimeters;

a body having a mating end and a splicing end, the mating end and the splicing end of the

body separated by a third length, the first optical fiber bonded to the body, the second optical fiber bonded to the body, the polished end of the first optical fiber and the polished end of the second optical fiber being substantially flush with the mating end of the body, and the third length of the body being less than the first length of the first optical fiber; and

a splice protector having a first end and a second end, the first end of the splice protector mechanically associated with the body, the splice protector having an aperture, and the second end of the splice protector separated from the mating end of the body by a fourth length, the fourth length being greater than the first length of the first optical fiber, and wherein the splicing end of the first optical fiber is situated in the aperture of the splice protector, and the splicing end of the second optical fiber is situated in the aperture of the splice protector.

9. A device according to Claim 8, further comprising an adhesive material positioned between the first optical fiber and the body, and between the second optical fiber and the body so as to bond the first optical fiber to the body, and to bond the second optical fiber to the body.

10. A device according to Claim 9 wherein the body has a first aperture, the first aperture extending from the mating end to the splicing end, a first portion of the first optical fiber positioned in the first aperture, and wherein the body has a second aperture, the second aperture extending from the mating end to the splicing end, a second portion of the second optical fiber positioned in the second aperture.

11. A device according to Claim 10 wherein the body is made of a polymer material.

12. A device according to Claim 11 wherein the splice protector is made of a polymer material which is transparent to U.V. radiation.

13. A device according to Claim 12 wherein the first optical fiber is made from a glass

material, and wherein the second optical fiber is made from a glass material.

14. A device according to Claim 13 wherein a coefficient of thermal expansion of the glass material of the first optical fiber is substantially the same as a coefficient of thermal expansion of the polymer material of the body, and wherein a coefficient of thermal expansion of the adhesive material is substantially the same as the coefficient of thermal expansion of the polymer material of the body.

15. A device according to Claim 14 wherein the device is compatible with and mateable to a receptacle for a connector where the connector is selected from the group consisting of MT, MP, MPX, MU, MAC, OGI, and HBMT style connectors.

16. A device according to Claim 15, further comprising a third optical fiber of a flex circuit, the third optical fiber having a free end, the free end of the third optical fiber spliced to the splicing end of the first optical fiber, and further comprising a fourth optical fiber of the flex circuit, the fourth optical fiber having a free end, the free end of the fourth optical fiber spliced to the splicing end of the second optical fiber.

17. A device comprising:

a first optical fiber having a polished end and a splicing end, the polished end and the splicing end of the first optical fiber separated by a first length;

a second optical fiber having a polished end and a splicing end, the polished end and the splicing end of the second optical fiber separated by a second length, the second length of the second optical fiber being substantially the same as the first length of the first optical fiber, the second optical fiber being substantially parallel to the first optical fiber, the second optical fiber and the first optical fiber form a plane, and the second length of the second optical fiber being

less than fifty millimeters;

a body having a mating end and a splicing end, the mating end and the splicing end of the body separated by a third length, the first optical fiber bonded to the body, the second optical fiber bonded to the body, the polished end of the first optical fiber and the polished end of the second optical fiber being substantially flush with the mating end of the body, and the third length of the body being less than the first length of the first optical fiber; and

a splice protector having a first end and a second end, the first end of the splice protector mechanically associated with the body, the splice protector having a recess, and the second end of the splice protector separated from the mating end of the body by a fourth length, the fourth length being greater than the first length of the first optical fiber, and wherein the splicing end of the first optical fiber is situated in the recess of the splice protector, and the splicing end of the second optical fiber is situated in the recess of the splice protector.

18. A method of making a device comprising the steps of:

forming a body having a mating end and a splicing end, the body having a first aperture and a second aperture;

inserting a first optical fiber into the first aperture of the body, the first optical fiber having a polishing end and a splicing end, the polishing end of the first optical fiber situated adjacent to the mating end of the body;

inserting a second optical fiber into the second aperture of the body, the second optical fiber having a polishing end and a splicing end, the polishing end of the second optical fiber situated adjacent to the mating end of the body;

polishing the first optical fiber and the second optical fiber adjacent to the mating end of

the body;

inserting optical fibers of a flex circuit through an aperture of a splice protector;

positioning the splicing ends of the first and second optical fibers adjacent to ends of the optical fibers of the flex circuit;

splicing the splicing ends of the first and second optical fibers to the ends of the optical fibers of the flex circuit so as to form a spliced area; and

mechanically associating the splice protector with the body so as that the aperture of the splice protector encompasses the spliced area.

19. A method according to Claim 18 wherein the step of splicing is achieved by way of a lasing device.

20. A device comprising:

a first optical fiber having a polished end and a splicing end, the polished end and the splicing end of the first optical fiber separated by a first length;

a second optical fiber having a polished end and a splicing end, the polished end and the splicing end of the second optical fiber separated by a second length, the second length of the second optical fiber being substantially the same as the first length of the first optical fiber;

a third optical fiber having a polished end and a splicing end, the polished end and the splicing end of the third optical fiber separated by a third length, the third length of the third optical fiber being substantially the same as the first length of the first optical fiber, and the third length of the third optical fiber being less than fifty millimeters, and wherein the first optical fiber, the second optical fiber, and the third optical fiber form a plane;

a body having a mating end and a splicing end, the mating end and the splicing end of the

body separated by a fourth length, the first optical fiber bonded to the body, the second optical fiber bonded to the body, the third optical fiber bonded to the body, the polished end of the first optical fiber, the polished end of the second optical fiber, and the polished end of the third optical fiber being substantially flush with the mating end of the body, and the fourth length of the body being less than the first length of the first optical fiber, and the polished end of the first optical fiber and the polished end of the third optical fiber straddle the polished end of the second optical fiber; and

a splice protector having a first end and a second end, the first end of the splice protector mechanically associated with the body, the splice protector having an aperture, and the second end of the splice protector separated from the mating end of the body by a fifth length, the fifth length being greater than the first length of the first optical fiber, and wherein the splicing end of the first optical fiber is situated in the aperture of the splice protector, the splicing end of the second optical fiber is situated in the aperture of the splice protector, and the splicing end of the third optical fiber is situated in the aperture of the splice protector, and the splicing end of the second optical fiber and the splicing end of the third optical fiber straddle the splicing end of the first optical fiber.

21. A device according to Claim 20, further comprising a fourth optical fiber of a flex circuit, the fourth optical fiber having a free end, the free end of the fourth optical fiber spliced to the splicing end of the second optical fiber, and further comprising a fifth optical fiber of the flex circuit, the fifth optical fiber having a free end, the free end of the fifth optical fiber spliced to the splicing end of the first optical fiber, and further comprising a sixth optical fiber of the flex circuit, the sixth optical fiber having a free end, the free end of the sixth optical fiber spliced to

the splicing end of the third optical fiber, and wherein the free end of the fourth optical fiber and the free end of the sixth optical fiber straddle the free end of the fifth optical fiber.